Conservationist®

LOW-NOx POWERED-BURNER MODELS

Conservationist® (BTP and BTPV) commercial water heaters offer precise powered-burner performance for medium-demand commercial applications, plus the flexibility of conventional atmospheric venting, sidewall venting or direct venting. To help ensure optimum performance, A. O. Smith offers professional start-up service on BTP and BTPV models.

VENTING OPTIONS

- BTP models designed for conventional atmospheric vertical venting. Barometric draft regulating damper provided. Order Vent Kit Part # 170777-005.
- BTPV models designed for horizontal atmospheric sidewall venting or direct venting, using optional vent kits.
  - For sidewall venting order Vent Kit Part # 192049-000.
  - For direct venting order Vent Kit Part # 192050-002.

LOW-NOx POWERED GAS BURNER (NATURAL GAS ONLY)

- Pre-mix design with internal Flue Gas Recirculation (FGR)
- Safety features include internal blocked flue sensor, separate pilot system, internal thermal cutoff and anti-flashback barrier

FULLY AUTOMATIC CONTROLS

- Including safety shut-off, high-temperature limit control
- Dual thermostat, adjustable from 120º F to 180º F

DRAFT EQUALIZING COMBUSTION CHAMBER

- Patented dome system ensures optimum flue loading and efficient heat transfer by balancing pressure inside combustion chamber

ASME TANK CONSTRUCTION ON ALL MODELS

- Rated working pressure: 160 PSI

FACTORY-INSTALLED AGA/ASME TEMPERATURE & PRESSURE RELIEF VALVE

GLASS-LINED TANK WITH MULTIPLE ANODE RODS

- For optimum protection against tank corrosion

FLAME INSPECTION PORT

HANDHOLE CLEANOUT

- For easy cleanout of sediment from tank bottom

HIGH-ALTITUDE INSTALLATION

- Adjustable air intake damper easily reset for high-altitude installation by authorized start-up agent

CODES AND STANDARDS

- Meets ASHRAE/IESNA 90.1-1999 thermal efficiency and standby loss requirements
- Meets SCAQMD R1146.2 low-NOx requirements

WARRANTY

- Three-year limited tank warranty
- For complete warranty information, consult written warranty shipped with water heater, or contact A. O. Smith Water Heaters

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CAPACITY, INPUT AND OUTPUT

MODEL NUMBER	BTU INPUT PER HOUR	Gallons or Litres	TANK SIZE	FIRST HOUR RATING 100° F RISE	GPH or LPH	RECOVERY-GALLONS PER HOUR AT °F TEMPERATURE RISE		
						40°F	100°F	140°F
						4°C	56°C	78°C
BTP 540A	540,000	U.S. Gallons	85	583	GPH	1309	523	374
BTPV 540A		Litres	321.7	2206.7	LPH	4954.6	1979.6	1415.6
BTP 650A	650,000	U.S. Gallons	85	690	GPH	1579	630	450
BTPV 650A		Litres	321.7	2611.7	LPH	5976.5	2384.6	1703.3
BTP 740A	740,000	U.S. Gallons	85	778	GPH	1794	718	512
BTPV 740A		Litres	321.7	2944.7	LPH	6790.3	2717.6	1937.9

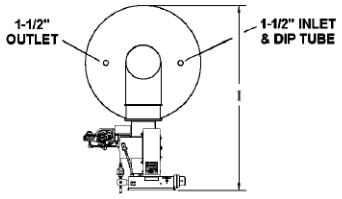
Based on 80% Thermal Efficiency obtained in A. O. Smith engineering laboratories.
To compensate for effects of high altitude above 2,000 feet, recovery ratings should be reduced approximately 4% for every 1,000 feet above sea level.
Current Draw (120V, 60Hz, 1 Phase): 6.0 Amps

DIMENSIONS AND WEIGHT – ALL MODELS

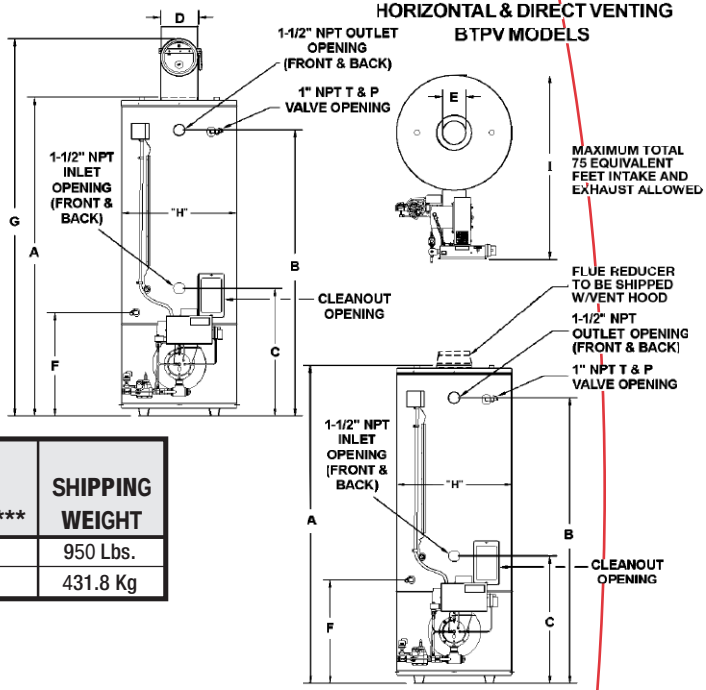
Inches or CM	DIMENSIONS									GAS CONN.***	SHIPPING WEIGHT
	A	B	C	D	E	F	G	H	I		
Inches	80-3/4	73	32-1/4	9	26-1/2	26-1/2	93	29-1/2	48-1/2	1″	950 Lbs.
CM	205.1	185.4	81.9	22.9	67.3	67.3	236.2	74.9	123.2	-	431.8 Kg

*D dimension is for atmospheric vent size (BTP models).
**E dimension is for direct and sidewall vent size (BTPV models).
***Minimum gas supply pipe is 1-1/4". See Reference Manual, Table 7 for gas supply pipe size.

STANDARD BAROMETRIC DRAFT CONTROL
BTP MODELS



HORIZONTAL & DIRECT VENTING
BTPV MODELS



SUGGESTED SPECIFICATION

Water heater(s) shall be A. O. Smith Model _____ or equal, with maximum storage capacity of 85 gallons, an input rating of _____ BTU/Hr., a recovery rating of ___ GPH at 100º F temperature rise, and minimum thermal efficiency of 80%. Heater(s) shall meet ASHRAE/IESNA 90.1-1999 requirements for thermal efficiency and standby loss, and meet SCAQMD R1146.2 low-NOx requirements. In addition, heater(s) shall: 1) Include a powered gas burner, redundant main gas valves, gas pressure regulator and flame inspection port. 2) Include a high-temperature limit control, dual-bulb thermostat for accurate temperature control and anti-stacking compensation and a factory-installed AGA rated temperature and pressure relief valve. 3) Be equipped with 1-1/2″ NPT water inlet and outlet and a boiler-type handhole cleanout. 4) Shall be constructed and stamped in accordance with ASME Boiler and Pressure Vessel Code and be so marked for a maximum working pressure of 160 PSI. 5) Have a glass-lined steel tank with multiple anodes for corrosion protection, and polyurethane foam insulation. 6) Tank shall have a 3-year limited warranty against corrosion as outlined in the written warranty.

Venting: BTP heater(s) shall be supplied with a Barometric Draft Regulator for conventional atmospheric venting. BTPV heater(s) shall be supplied with an optional vent kit allowing for horizontal sidewall venting or direct venting.

Burner and Controls: Burner(s) shall be pre-mix design, with internal FGR and thermal cutoff, separate spark pilot ignition system, integral blocked flue sensor, glass view port, main gas regulator, automatic gas valve, manual test cock and manual gas shutoff. Burner(s) must be factory-installed, tested and started by an A. O. Smith Authorized BTP Start-up Agent before being placed into operation.

A.O.Smith Water Heaters
www.hotwater.com
500 Tennessee Waltz Pkwy, Ashland City, TN 37015

For Technical Information and Automated Fax Service, call 800-527-1953.
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